



Draft Report for



Idaho Transportation Department

U.S. Highway 89 Corridor Plan

Corridor Plan Report

Prepared by

DKS Associates

TRANSPORTATION SOLUTIONS

in association with
Winterbrook Planning

March 2007

US Highway 89 Corridor Plan Corridor Plan Report

Draft Report

March, 2007



Prepared By:

DKS Associates, Inc.

in association with

Winterbrook Planning

Table of Contents

LIST OF FIGURES	iii
LIST OF TABLES	v
I. EXECUTIVE SUMMARY.....	1
INTRODUCTION	1
PUBLIC INVOLVEMENT.....	1
PURPOSE AND NEED, GOALS, OBJECTIVES, AND EVALUATION CRITERIA	4
RECOMMENDATIONS	5
RECOMMENDED IMPROVEMENTS	6
FINDINGS	9
II. INTRODUCTION.....	17
STUDY AREA.....	17
STATEMENT OF PURPOSE	17
STATEMENT OF NEED.....	19
PUBLIC INVOLVEMENT PROGRAM.....	19
STUDY ORGANIZATION	23
III. TRANSPORTATION CONDITIONS	26
EXISTING TRANSPORTATION CONDITIONS	26
Existing Roadway Conditions	26
Existing Bicycle and Pedestrian Conditions.....	62
Existing Conditions for Other Modes.....	68
Local Transportation Plans.....	70
FUTURE TRANSPORTATION CONDITIONS	72
Future Roadway Conditions	72
Future Bicycle and Pedestrian Conditions	89
Future Conditions for Other Modes	89
IV. LAND USE AND ENVIRONMENTAL CONDITIONS.....	90
LAND USE CONDITIONS	90
Existing Land Use Conditions.....	90
Future Land Use Conditions.....	96
ENVIRONMENTAL CONDITIONS	102
Socio-Economic Profile.....	102
Environmental Scan.....	111
V. PURPOSE AND NEED, GOALS AND OBJECTIVES, AND EVALUATION CRITERIA	127
PURPOSE AND NEED.....	127

Table of Contents (cont.)

Purpose	127
Need.....	127
GOALS, OBJECTIVES, AND EVALUATION CRITERIA	128
VI. IMPROVEMENTS	131
IMPROVEMENT IDENTIFICATION PROCESS.....	131
RECOMMENDED IMPROVEMENTS	132
Segment 1 – Utah State Line to Minnetonka Cave Rd.....	135
Segment 2 – Minnetonka Cave Rd. to Paris S. City Limits	141
Segment 3 – Paris S. City Limits to Ovid Corner	143
Segment 4 – Ovid Corner – Montpelier E. City Limit	165
ACCESS MANAGEMENT STRATEGY	166
Access Management Policy, Standards, and Procedures	168
Application of Standards and Procedures.....	172
Existing Access Conditions.....	173
Access Management Measures.....	175
VII. RECOMMENDATIONS	180
APPENDICES	
APPENDIX A: Reported Roadway Deficiencies	182
APPENDIX B: Level of Service Parameters and Input Data	189
APPENDIX C: Definitions	196
APPENDIX D: Traffic Forecasting Model.....	198
APPENDIX E: Housing and Employment Forecasting Methodology	205
APPENDIX F: Recommended Improvements.....	213

List of Figures

Figure 1	Corridor Study Area	18
Figure 2	Existing Functional Classification	27
Figure 3	Existing Number of Lanes.....	29
Figure 4	2001 Annual Average Daily Traffic.....	30
Figure 5	US 89 Monthly Traffic Variation.....	31
Figure 6	US 89 Hourly Traffic Variation	32
Figure 7	2002 Design Hour Traffic Volumes	34
Figure 8	Existing Level of Service	38
Figure 9	Existing Level of Service Deficiencies	39
Figure 10	Reported Capacity and Traffic Operations Deficiencies.....	42
Figure 11	Existing Traffic Operations Deficiencies	44
Figure 12	Existing Accident Rates	49
Figure 13	Reported Safety Deficiencies	52
Figure 14	Existing Lane and Shoulder Widths	55
Figure 15	Existing Geometric Deficiencies.....	56
Figure 16	Reported Geometric Deficiencies	61
Figure 17	Existing Bicycle and Pedestrian Facilities	63
Figure 18	Existing Bicycle and Pedestrian Volumes.....	64
Figure 19	Existing Bicycle and Pedestrian Facility Needs.....	66
Figure 20	Reported Bicycle and Pedestrian Facility Needs	67
Figure 21	Existing Facilities - Other Modes.....	69
Figure 22	Transportation Analysis Zones.....	73
Figure 23	2025 Design Hour Traffic Volumes	76
Figure 24	Design Hour Traffic Volume Growth	77
Figure 25	2025 Annual Average Daily Traffic.....	78
Figure 26	2025 Level of Service.....	80
Figure 27	2025 Level of Service Deficiencies.....	83
Figure 28	2025 Traffic Operations Deficiencies	85
Figure 29	Future Land Use Concept.....	97
Figure 30	Wetlands Inventory	115
Figure 31	Cultural and Historical Resources	122
Figure 32	Typical Two-Lane Cross-Section.....	133
Figure 33	Recommended Improvements	134
Figure 34	Two-Way Center Turn Lane Fish Haven	136
Figure 35	Example Left-Turn Lane at Lake West Blvd.	138
Figure 36	Example Right-Turn Lane at Loveland Ln.	139
Figure 37	Two-Way Center Turn Lane with Intersection Turn Lanes	142
Figure 38	Example "T" Intersection at Ovid Corner	146
Figure 39	Example Roundabout at Ovid Corner	147
Figure 40	Example Grade-Separated Interchange at Ovid Corner	148
Figure 41	Example Bypass at Ovid Corner	149

List of Figures (cont.)

Figure 42	Ovid Curve - 35-MPH Design Speed Option.....	151
Figure 43	Ovid Curve - 45-MPH Design Speed Option.....	152
Figure 44	Ovid Curve - 55-MPH Design Speed Option.....	153
Figure 45	Ovid Curve - 65-MPH Design Speed Option.....	154
Figure 46	Ovid Curve - Land Use Impacts of 35-MPH Option	157
Figure 47	Ovid Curve - Land Use Impacts of 45-MPH Option	158
Figure 48	Ovid Curve - Land Use Impacts of 55-MPH Option	159
Figure 49	Ovid Curve - Land Use Impacts of 65-MPH Option	160
Figure D-1	Modeling Process	Appendix D

List of Tables

Table 1	US 89 Level of Service Standards.....	35
Table 2	Existing Level of Service Summary - US 89 Segments.....	37
Table 3	Existing Level of Service Summary - US 89 Intersections.....	40
Table 4	Existing Left-Turn Lane Deficiency Summary.....	45
Table 5	Existing Right-Turn Lane Deficiency Summary.....	45
Table 6	Accident Rate Summary - US 89 Segments.....	48
Table 7	Accident Rate Summary - US 89 Intersections.....	50
Table 8	ITD Lane and Shoulder Width Standards	53
Table 9	Existing Lane and Shoulder Width Summary	54
Table 10	ITD Bridge Width Standards.....	57
Table 11	Existing Sight Distance Summary - US 89 Intersections.....	59
Table 12	Distribution Percentages for I-I, I-X Trips.....	74
Table 13	2025 Level of Service Summary - US 89 Segments	81
Table 14	2025 Level of Service Summary - US 89 Intersections	84
Table 15	2025 Left-Turn Lane Deficiency Summary	86
Table 16	2025 Right-Turn Lane Deficiency Summary	86
Table 17	Bear Lake County Land Ownership	94
Table 18	2025 Forecast of New Housing Units in Bear Lake County	96
Table 19	Comparison of Bear Lake County Population Forecasts	98
Table 20	1999 Bear Lake County Employment Profile	99
Table 21	1999 Employment per Housing Unit.....	99
Table 22	2025 Employment Forecast.....	100
Table 23	Employment Growth Rates	100
Table 24	Retail Employment Distribution Assumptions.....	101
Table 25	Special Status Species	120
Table 26	Leaking Underground Storage Tanks.....	125
Table 27	Ovid Corner Imp. Options - Land Use Impacts and Est. ROW Costs	161
Table 28	Ovid Corner Imp. Options - Planning Level Cost Est. Summary	161
Table 29	Ovid Corner Imp. Options - Benefit-Cost Analysis Summary	164
Table 30	ITD Approach and Signal Spacing Standards.....	170
Table 31	Existing Intersection and Approach Spacing - Bear Lake Area.....	174
Table A-1	US 89 Reported Roadway Deficiencies	Appendix A
Table B-1	<i>HCM</i> Two-Lane Highway LOS Parameters and Input Data.....	Appendix B
Table B-2	HIGHPLAN LOS Parameters and Input Data	Appendix B
Table B-3	<i>HCM</i> Urban Streets LOS Parameters and Input Data	Appendix B
Table B-4	<i>HCM</i> Signalized Intesection LOS Parameters and Input Data	Appendix B
Table B-5	<i>HCM</i> Unsignalized Intesection LOS Parameters and Input Data ..	Appendix B
Table D-1	Study Area Land Use	Appendix D
Table D-2	ITE Recreational Trip Generation Rates	Appendix D
Table F-1	Recommended Improvements	Appendix F